

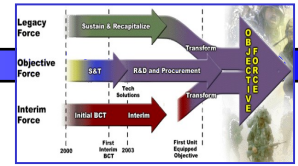
# *United States Army* *Logistics Transformation Agency*



## **Common Logistic Operating Environment**

**CLOE Corporate Brief**  
**See Me for LTA Director**  
**8 July 2003**

**Materiel Logistics Division**  
**Logistics Transformation**  
**Agency**  
**(717) 770-7600**

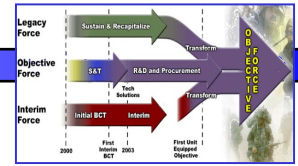


# Background

## ■ ***Since Our Last Briefing***

- SBCT PoE Campaign Plan Has Been Very Successful
  - Established the Importance of the SBCT PoE
  - Led to the “Piling on Effect”, Increased Scope
  - Increased the Risk of the SBCT PoE Technical Test & Demo (Cost & Schedule)
  - No Active Duty Green Suiters Support Available for Technical Test & Demo

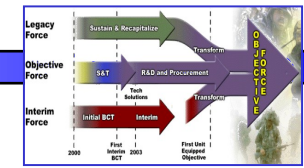
## ■ ***Result Has Led Us to Reconsider Our Direction Forward***



# ***CLOE Corporate Brief***

## ***Agenda***

- Motivation – Logistics Transformation
- Purpose
- Scope
- Principles
- Organization
- SIL Operation
- Milestones
- Benefits & Conclusion



# LOGISTICS TRANSFORMATION

Doctrine and Technology Must Be  
Interoperable for Platform & Soldier Health  
Management across All Equipment  
Generations

- Army of Excellence Force
- FXXI Force
- Stryker Force
- Future Combat Systems

**Generations of Forces  
Common Logistics  
Operating Environment**

**Objective Force**

Transformation  
Enablers

AIT

PLATFORM DATA BUS

EMBEDDED DIAGNOSTICS

EMBEDDED IETMS

AUTOMATED LOGBOOK

Digital PMCS

ON-BOARD Health Mgmt

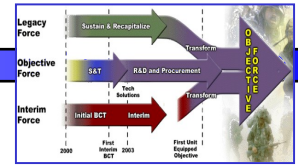
Integrated COM & ERP  
Interfaces

LDSS

PS / MRS

ing Army

00/02/16



## ***CLOE Purpose***

**The Purpose Of CLOE Is To Ensure Sustainment Interoperability Among Self Reporting, Self-Diagnosing Platforms And The Objective Force Sustainment System Network To Provide The Highest Possible State Of**

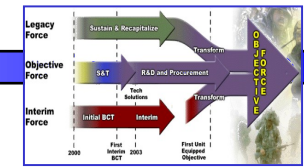
***Operational Availability***

***Mission Capability***

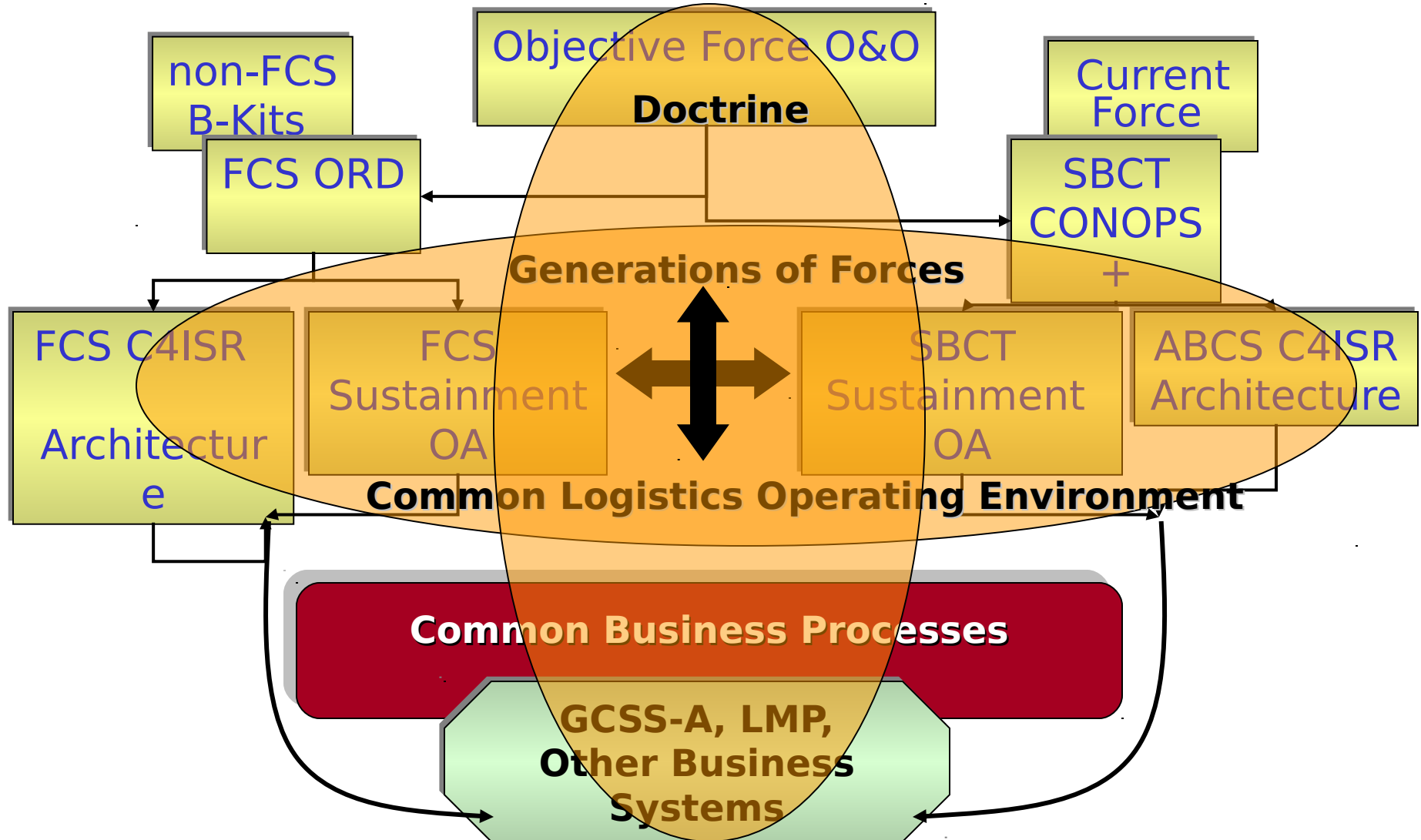
***Combat Power***

**While Reducing The Logistics Footprint**

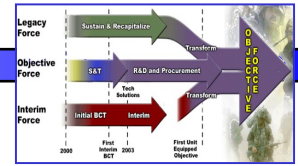
***Sustaining The Transforming Army***



# CLOE SCOPE



**Sustaining The Transforming Army**



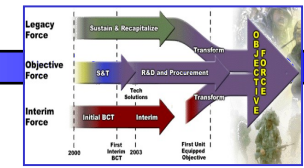
# CLOE Principles

- Work With All Army Staffs, Agencies And Programs To **Synchronize & Integrate** Sustainment Doctrine And Technology To Provide Condition-Based Maintenance And Anticipatory Logistics For The Objective Force
- Ensure Sustainment System & Platform **Interoperability** Across All Force Generations In The Objective Force
- **Reduce** the Logistics Footprint
- Minimize **Risk** For Log Transformation





# CLOE Program Execution



## 1. CLOE Strategy Paper

- Developed by LTA & G-4

## 2. CLOE Campaign Plan

- High-Level Overview
- Reviewed Annually
- Signed by G-4
- CLOE CONOPS

## 3. Army Asst Sec. of Acquisition Policy Memo

## 4. Management Plan

- Detailed Plan
- GOSC Structure
- Establish CCB Process
- Establish CLOE SIL

## 5. Implementation Plan

- Detailed Plan
- Continuously updated
- Signed by G-4 & G8

## 6. Architecture Plans

- Working Documents
- Updated During Each Phase of Transformation Development
- Addresses OF Increment #1



JIM C4ISR  
Unit of Action

Unit of Employment  
Commonality of Systems

Performance Based Logistics

Embedded Diagnostics & Prognostics

The right information, at the right time and right place

## CLOE Provides the Synergy for Logistics Transformation

- Program Management Structure
- Addresses Standards & Commonality
- Establishes Configuration Management
- Current Force Retirement plans

- Guidance for PEOs/PMs
- Relationship to GCSS-A/LMP
- Migration of Current Force
- Follows EI Template

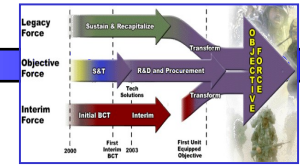
- Embedded Diagnostic Baseline
- Logistics Template for Current & Stryker Forces, FCS & UA
- Migration to OF

**Sustaining The Transforming Army**

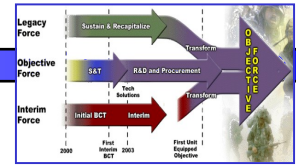




# LOG Transformation Technical Risk



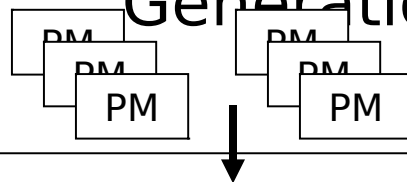
- Reduce Technical **Risk** For Log Transformation
  - Establish & Operate A CLOE Systems Integration Laboratory (SIL)
    - Evaluate Concepts
    - Verify & Validate Interfaces & Interoperability
    - Test Before Acquire/Field
    - Key Configuration Management Tool
    - Supports Simulation-based Acquisition
    - Standards-based Technology Insertion
  - Mobile SIL for Demonstrations



# ***CLOE Systems Integration Lab***

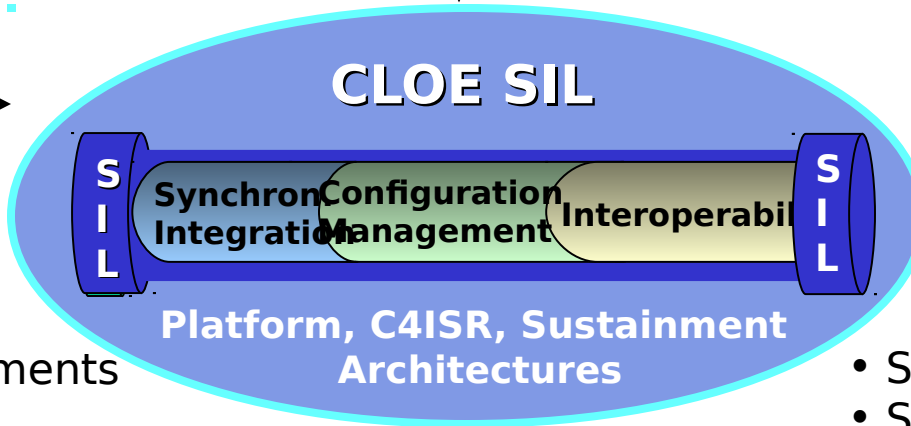
The CLOE SIL Operates as a Meta-Laboratory, Ensuring Interoperability Across All Equipment Force Generations

Synchronization  
Inputs



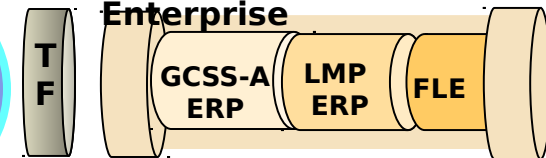
Life-cycle  
Verification & Validation

Operational Inputs →



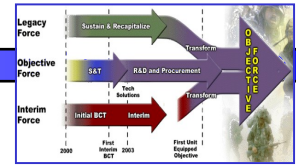
- System Requirements
- Doctrine
- Operational Architecture

→ Outputs to the Enterprise



- Sustainment Interoperability
- Software & Hardware V&V
- Life Cycle Support

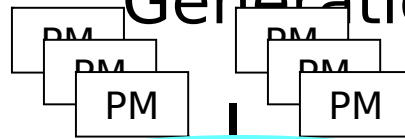
Platforms & Soldier Systems



# CLOE Systems Integration Lab

The CLOE SIL Operates as a Meta-Laboratory, Ensuring Interoperability Across All Equipment Force Generations

Synchronization  
Inputs



Life-cycle  
Verification & Validation

Operational Inputs

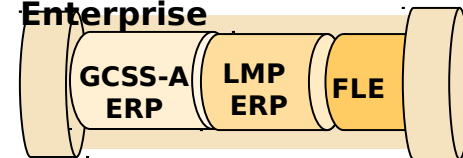


- System Requirements
- Doctrine
- Operational Architecture

## Logistics Transformation Agency

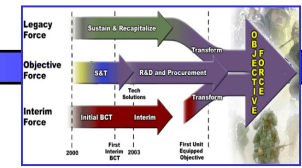
- Coordinate with other Army Activities
- Manage SBCT PoE (+)
- Establish & Manage CLOE SIL
- Define Transformation Rqmts. by Version
- Establish and Set SIL Priorities
- Oversight for CCB
- Execute CLOE Exercises
- Manage UA B Kit implementation

Outputs to the Enterprise



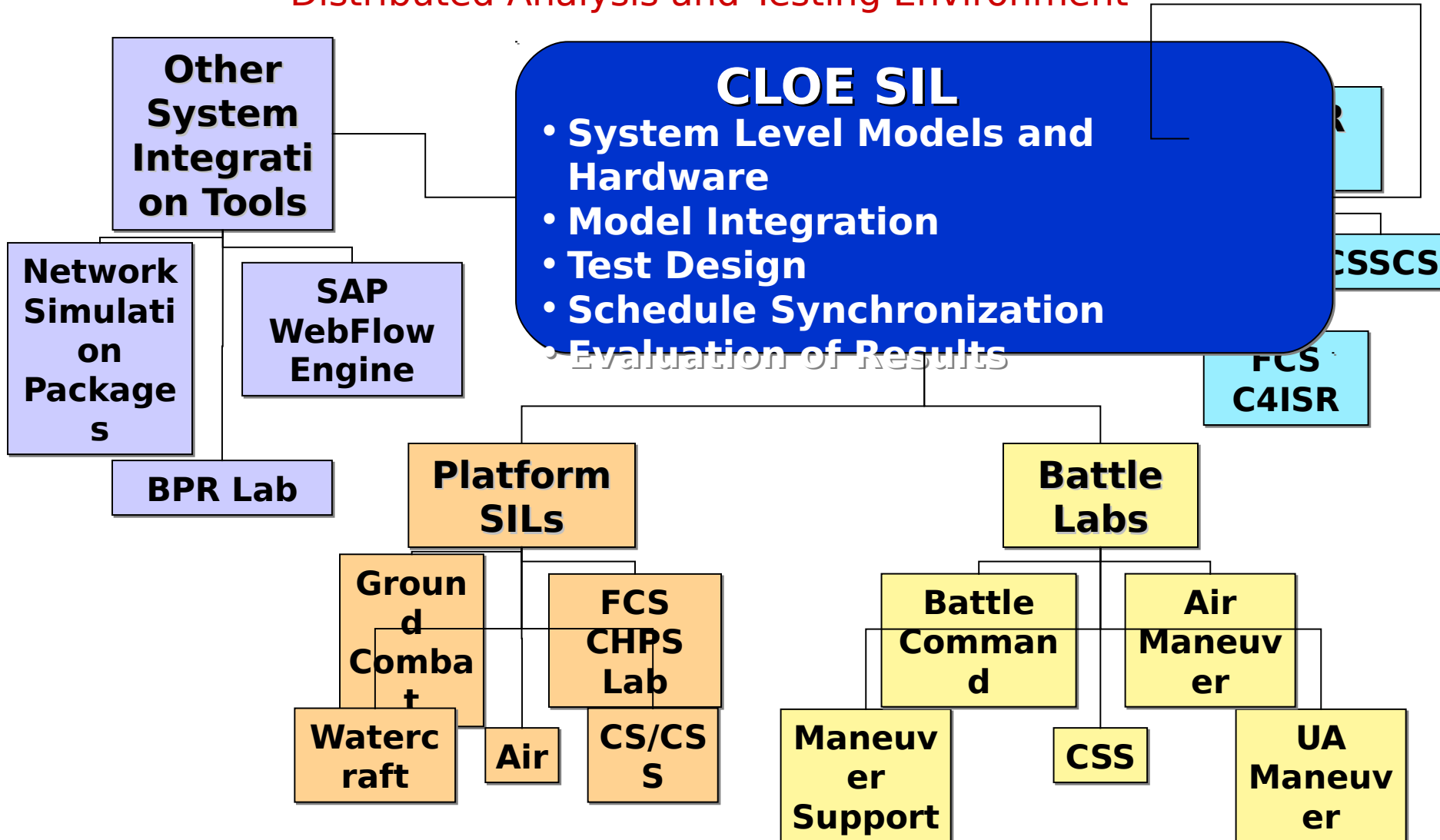
- Sustainment Interoperability
- Software & Hardware V&V
- Life Cycle Support

Platforms & Soldier Systems

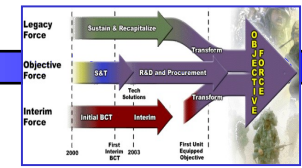


# CLOE SIL Concept

Distributed Analysis and Testing Environment



**Sustaining The Transforming Army**



# ***CLOE SIL Versions***

The CLOE SIL Starts With the SBCT PoE Operational Architecture and Adds Increasing Scope Until It Encompasses All Army Commodity Areas

**CLOE Ground, Soldier & Air OA**  
**GCSS-A (w/FCS)**

**CLOE Operational Architecture, 3.0**  
**Aviation & GCSS-A/T**

**CLOE Ground & Soldier OA**  
**(w/FCS)**

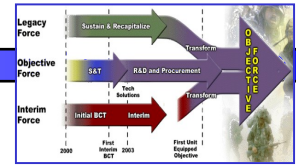
**CLOE Operational Architecture, 2.0**  
**ICS3 & Soldier Systems**

**CLOE Ground OA**  
**(SBCT & Current)**

**CLOE Operational Architecture, 1.0**  
**SBCT OA**



# CLOE SIL Integration + Synchronization Tasks



Logistics Transformation

CLOE SIL

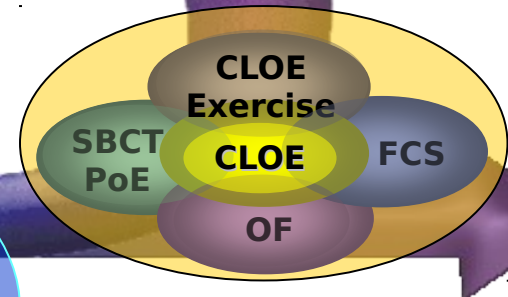
## Integration

ENABLERS



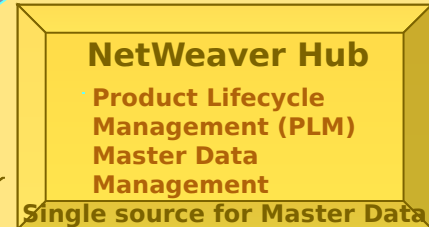
Sustainment Interoperability for the OF

Joint Compatibility



## Interface

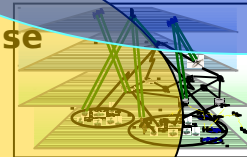
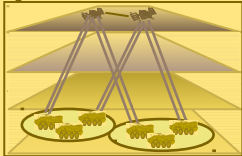
ERP



Mobile Apps

## Architectures

CLOE Operational Exercise



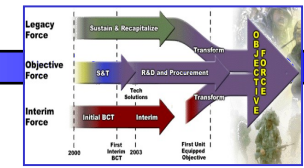
Unit of Action

## Synchronization

Common SW, APIs, Standards

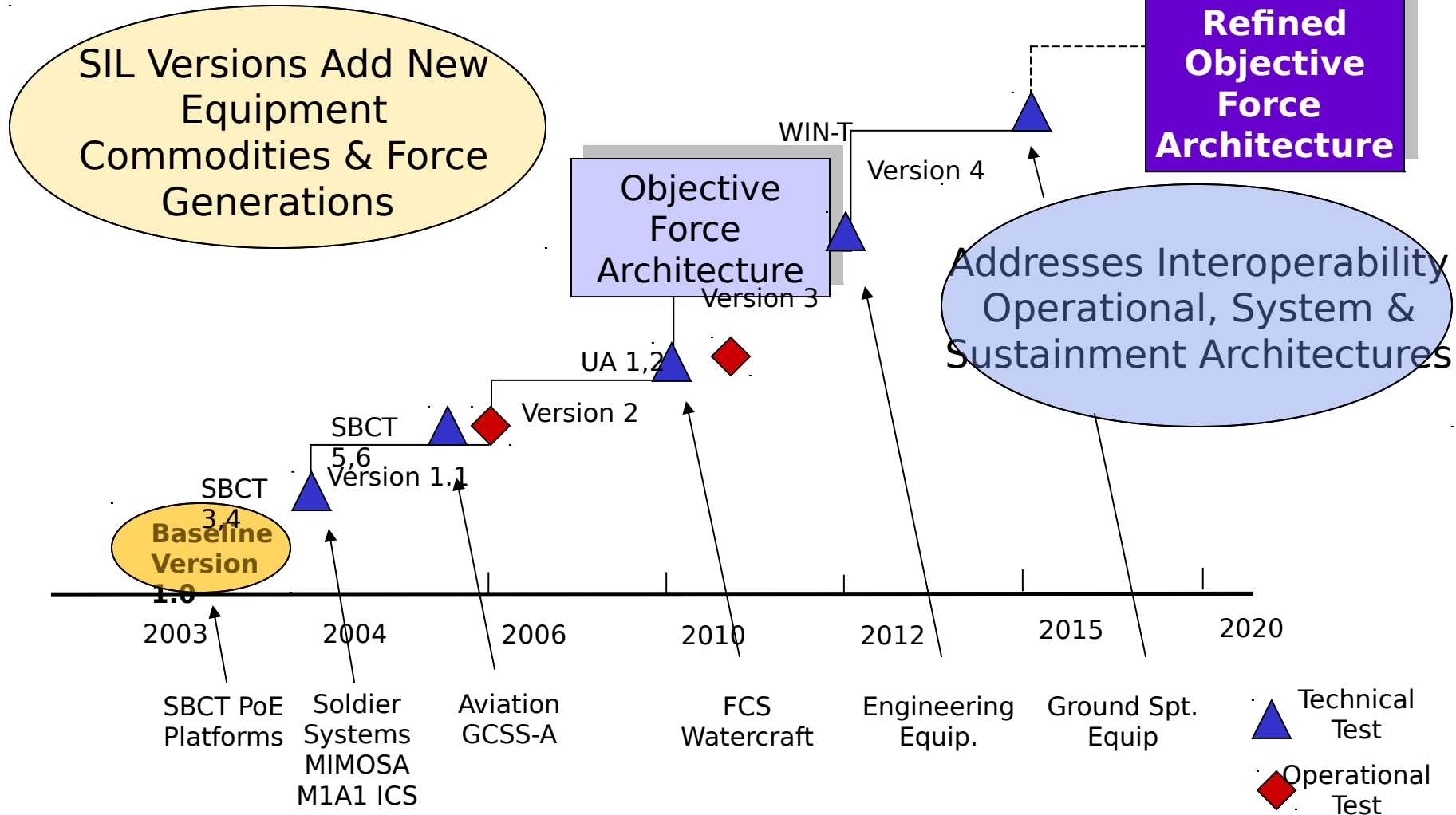
**Sustaining The Transforming Army**

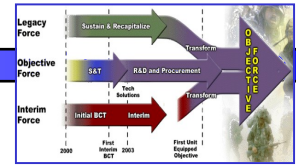




# CLOE SIL

## Continuous Improvement Cycle





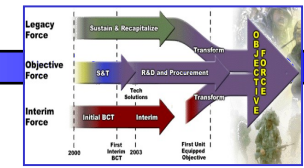
# ***SIL-Based PoE Demo***

## ■ **Advantages**

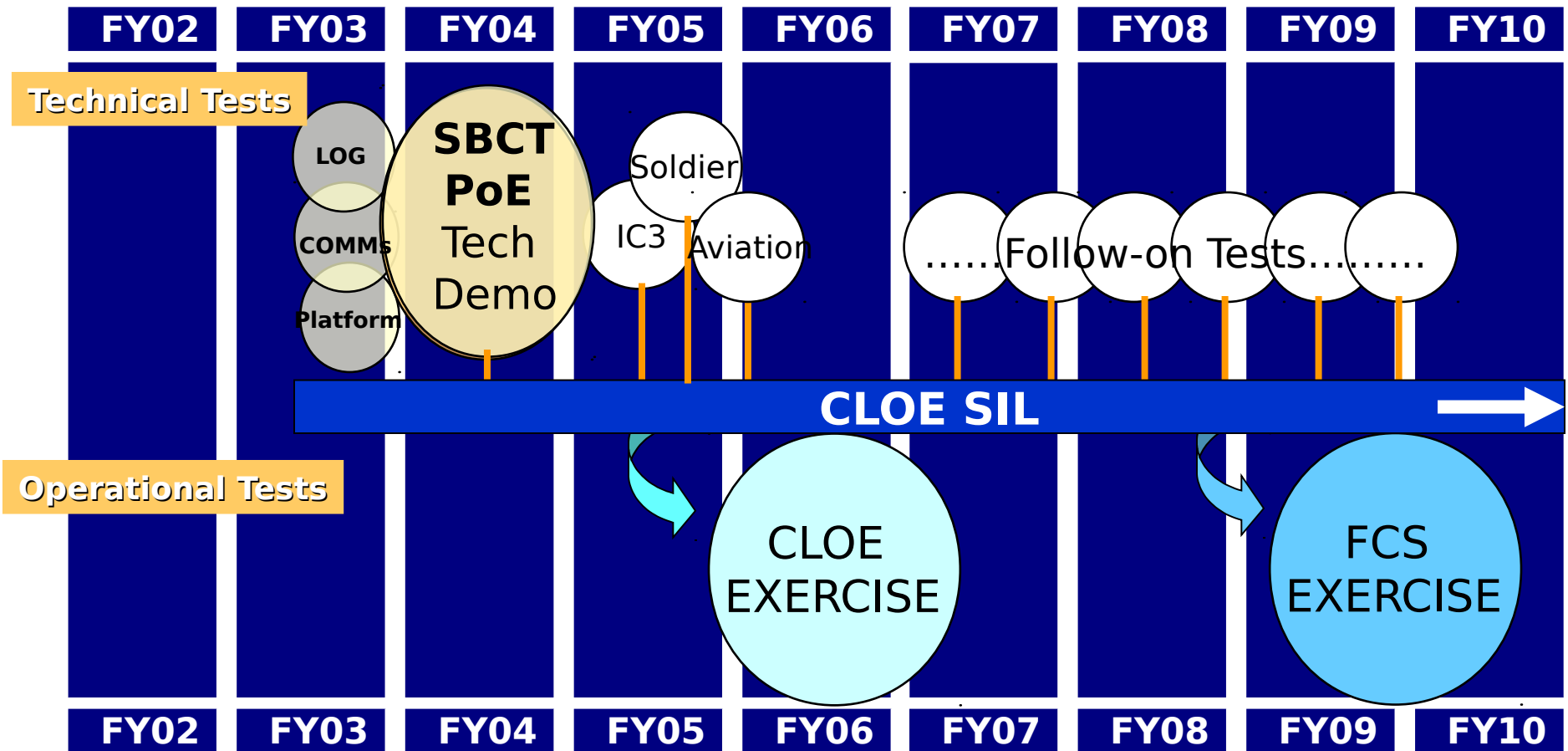
- Save funds
  - (~\$1m) required to bring a Stryker up to BCT 3/4 configuration
  - Re-invest funds into integrating additional functionality
- Save cost of configuring Ft. Knox and getting all required demo equipment to Knox
  - Avoid cost of hosting VIP event at Ft. Knox
  - Avoid Facility Costs
  - Avoid problem of finding green suiters to support demo
  - Avoid safety release requirements
- Shorten Developmental Timelines & Overall Schedule
  - Can use additional time to conduct more extensive tests
  - Add additional Functionality (ICS3, Soldier-Warrior, Battery Prognostics)
- Reduce time commitment of senior officers.
  - Demo results can be presented in briefing
  - SIL Tours & Mobile SIL

## ■ **Disadvantages**

- Already briefed as a full-blown demo

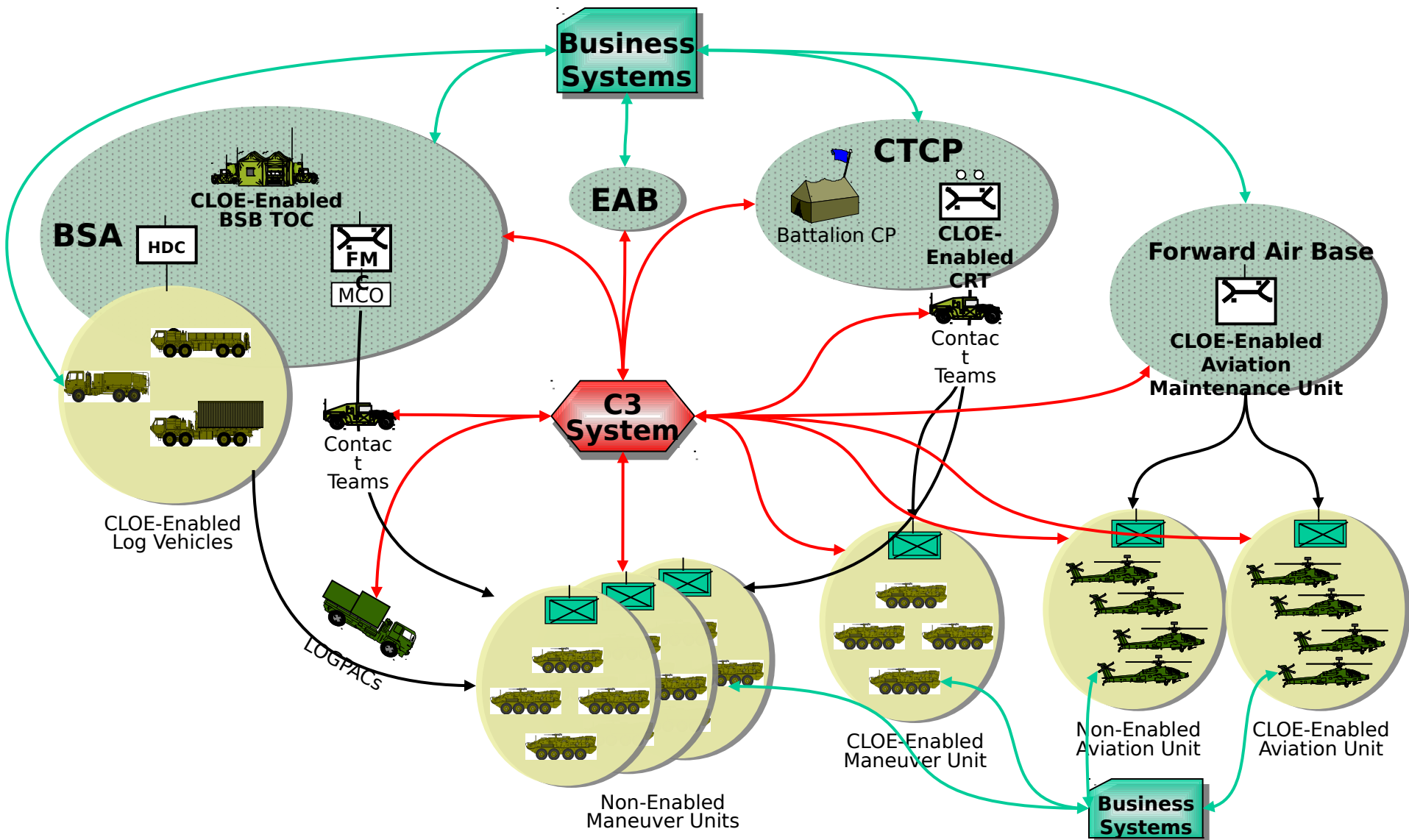
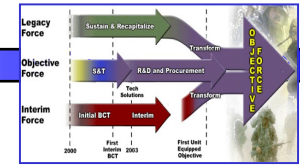


# CLOE Major Milestone Schedule

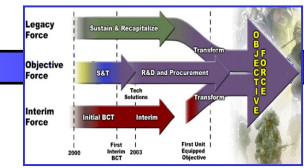




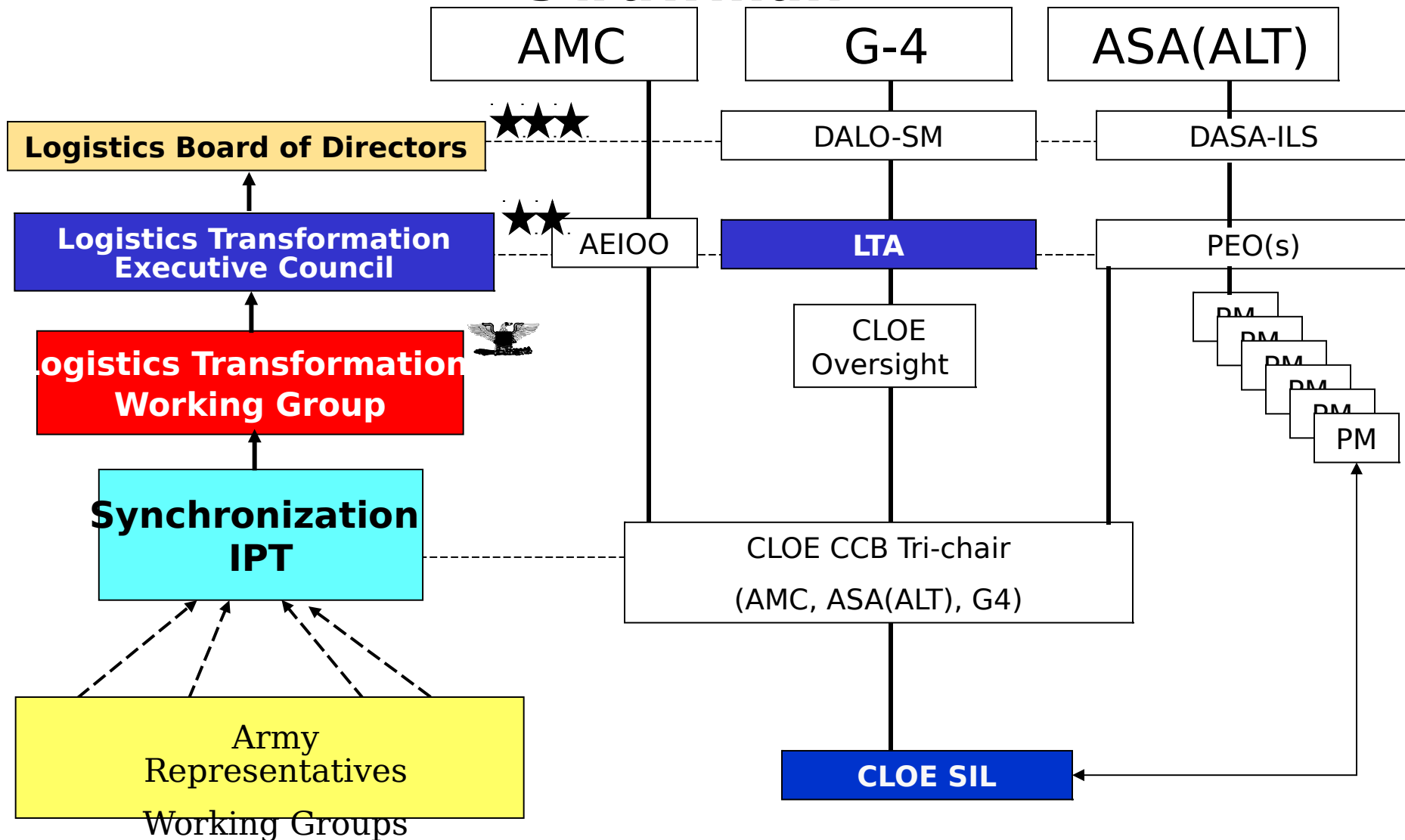
# CLOE Exercise Concept

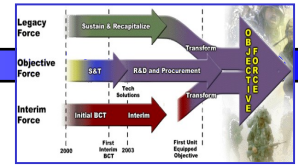


**Sustaining The Transforming Army**



# CLOE Organization Strawman

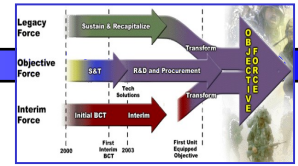




## *Benefits*

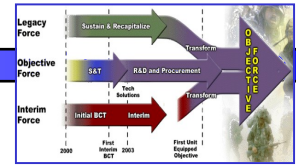
- Provide Roles & Responsibilities for Centralized Management of Logistics Transformation Activities
- Establish One location for Army Logistics Transformation Synchronization and Integration Efforts
- Reduce Logistics Transformation Risk
  - Configuration Management Control linked to the CCB Process
  - Verify & Validate Technical Interoperability
- Prioritized CLOE SIL activities provides insight for POM Strategy
- Test Before Acquire/Field



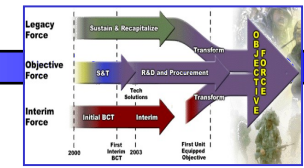


## *Thoughts to take away*

- CLOE Is A Collaborative, Living Process That Works With All Major Army Agencies, Organizations and Programs to Enable Logistics Transformation
- CLOE Is The Only Initiative That Addresses ARMY Sustainment Interoperability Among Current, Stryker And Objective Forces With Respect to Condition-Based Maintenance and Anticipatory Logistics
- The Synchronization of Sustainment Doctrine & Technology is an Outcome of the CLOE Process
- The Path For Platform Technology Insertion Goes Through the CLOE SIL

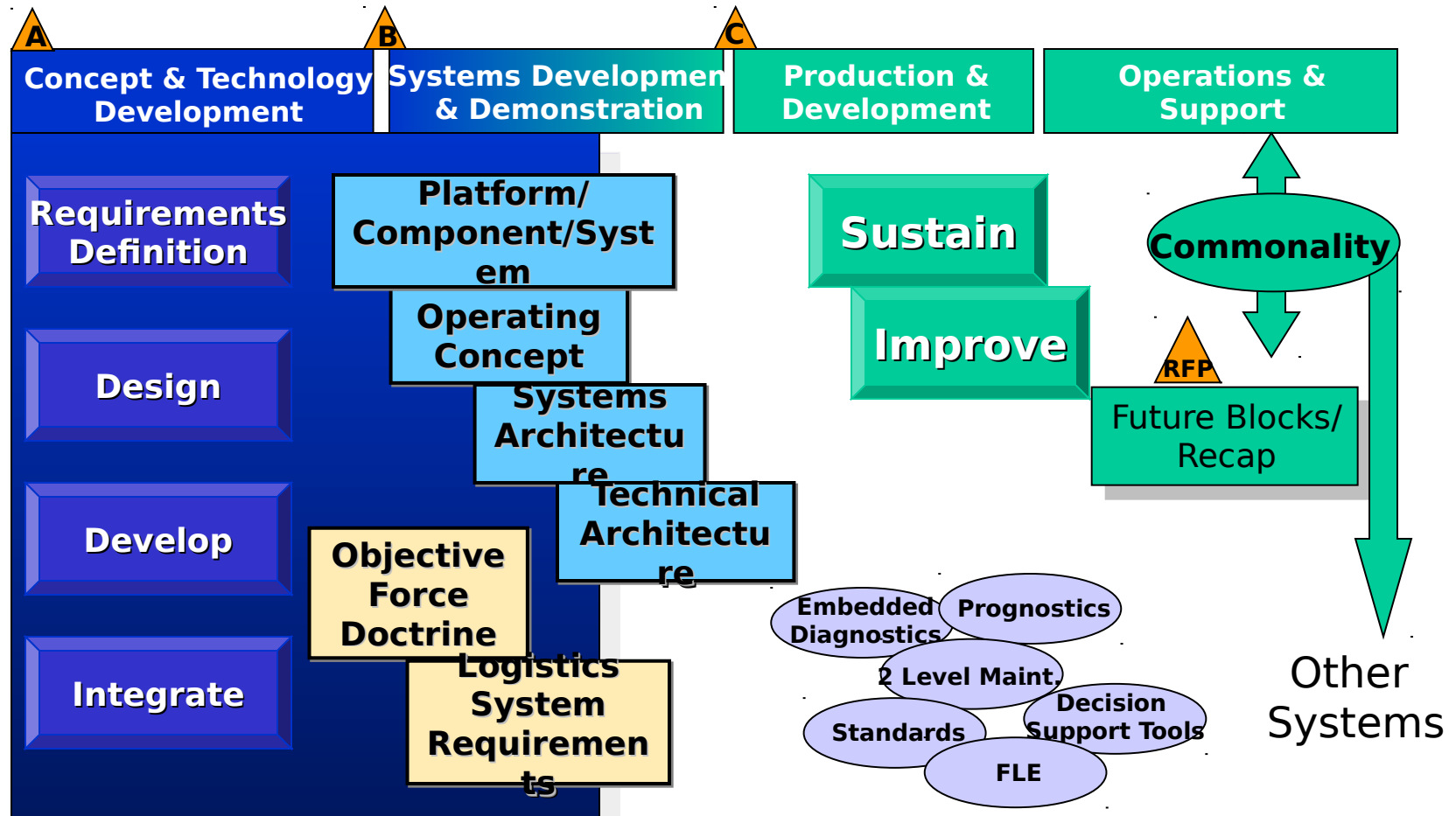


*BACKUP*

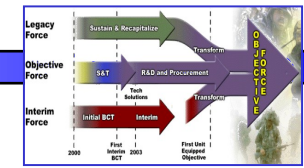


# CLOE SIL Life Cycle

## Milestones

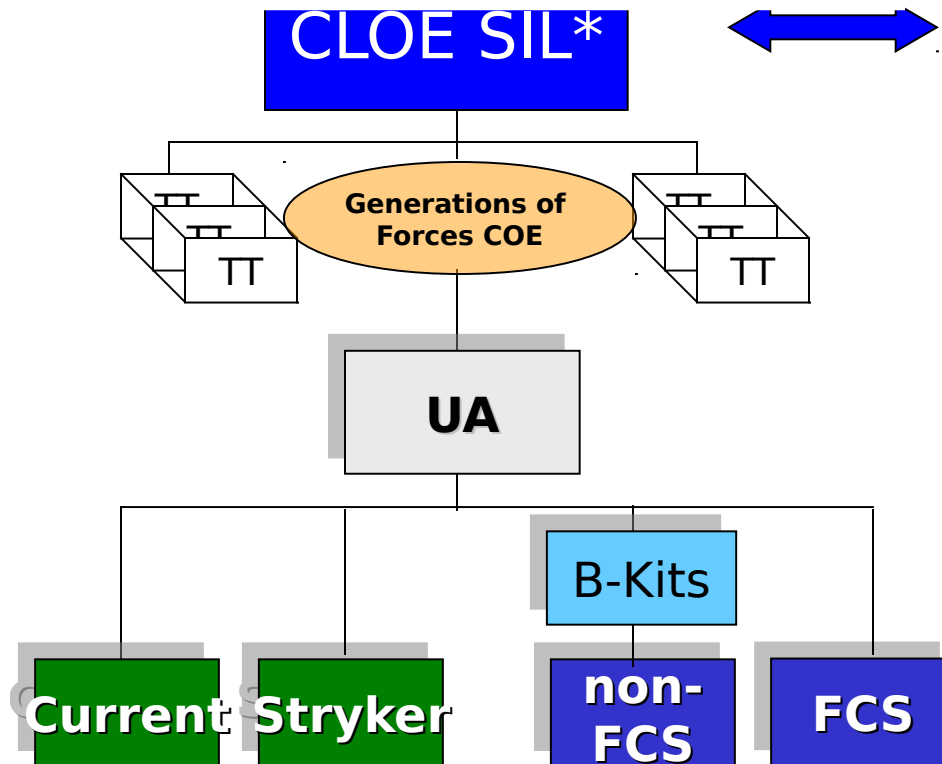


*Focus Process Enhancements on Sustainment Interoperability*



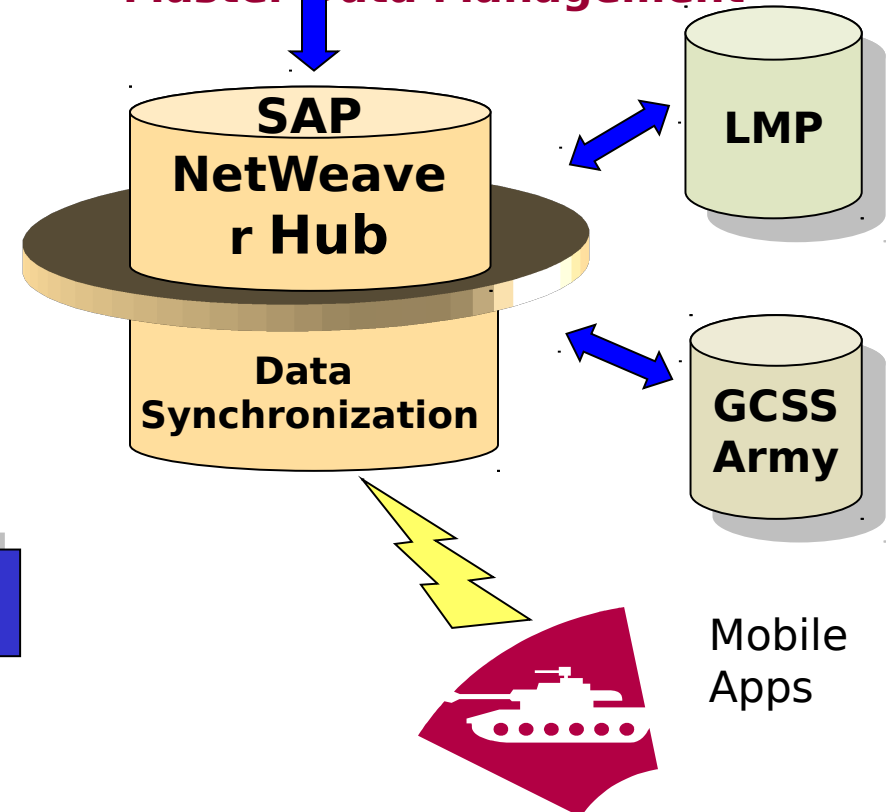
# Synchronizing Sustainment Doctrine & Technology

Sustainment Interoperability for the OF



✓ **Product Life Cycle Data Management**

✓ **Master Data Management**



\*Systems Integration Laboratory

**Sustaining The Transforming Army**